



Governor's STEM Advisory Council Regional STEM Network Hub

Application

April 6, 2012

Southeast Region

**The University of Iowa and
Kirkwood Community College**

Name of proposed requesting entity (or entries as partners):

The University of Iowa (UI) and Kirkwood Community College (KCC)

Name and title of primary contact:

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Region:

Southeast

Proposed Location:

The proposed SE STEM Regional Hub will be located in office space at the University of Iowa's Research Park Bioventures Center located in Coralville IA. The proposed location includes a 300 square foot fully furnished office; UI internet access; ICN conferencing; fully staffed incubator facility; access to support staff, well appointed board and conference rooms, large, centrally located multipurpose room for scheduled seminars and receptions.

Identify Your Mission:

Kirkwood Community College:

Kirkwood Community College's mission and vision are consistent with the philosophy held by the college and in accordance with the charge given it by the State of Iowa as an institution of higher education and in concert with other agencies. Its vision is to invent, develop and deliver learning solutions for the 21st century. Its mission is to: i) identify community needs, ii) provide accessible, quality education and training, and iii) promote opportunities for lifelong learning.

The University of Iowa:

The University of Iowa's four part mission of education, service, creating new knowledge and economic development is totally aligned with regional leadership of STEM education refinement. The University of Iowa produces STEM educated graduates in all fields, educates future teachers, counselors, school administrators, and STEM education professors; conducts research and evaluation on models of teaching and learning; partners with K-12 in Project Lead The Way, Science Olympiad, and First Tech Challenge; partners with community colleges across the state, community leaders, economic development entities; and works closely with business and industry to provide interns, business assistance and an educated workforce.

Identify Support:

The University of Iowa will provide office, furnishings, internet access, email, access to a University of Iowa vehicle, and miscellaneous administrative expenses to effectively run Iowa's SE STEM Regional Hub. In addition, The University of Iowa and Kirkwood Community College will each pay 25% of salary and fringe benefits of Iowa's SE STEM Regional Advocate.

Participating Organizations:

The SE STEM Regional Hub will be established as a shared partnership between the University of Iowa and Kirkwood Community College. The sponsoring organizations and Hub leadership will extend an invitation to the following regional organizations to be part of an affiliates group that will help guide the Hub's activities: Rockwell Collins, John Deere, Grant Wood AEA, ACT, AEAs that overlap with the SE STEM Regional Hub, Community Colleges that overlap with the SE STEM Regional Hub, Putnam Museum, Pearson, Regional Businesses with STEM linkages, Private colleges, Science Center in Cedar Rapids, School superintendents, K-12 school board, STEM teacher, parent, student representatives, Corridor Business Alliance, Iowa Workforce Development, County Extension, Library representative, Chamber of Commerce, and elected officials.

Funding Assistance:

The proposed SE STEM Regional Hub has available state-of-the-art training facilities for staff development, College of Education student interns to help staff the Hub office and implement offsite programs and communication, distance education capabilities, experts in curriculum design, development and evaluation, nationally recognized STEM trainers in the secondary and higher ed. levels, experiential linkages in University/Community College facilities, coaches and mentors for hands-on student and teacher experiences, formalized business and industry partnerships with over 450 STEM businesses in our region.

Additional Information:

The STEM Regional Hub model is a direct extension of work currently underway between the University of Iowa, Kirkwood Community College and (8 local high schools) or 6 local school districts to create a Regional STEM Center. The future STEM center has outstanding community support. Evidence of this support was demonstrated by the overwhelming (80%) support from Johnson County residents in passing the bond vote to construct the facility. Learner of all ages will benefit from the STEM center. This Center will be constructed at the University of Iowa Research Park campus and will enhance the scientific underpinnings of technical and dual credit career academy training, augment career academy educational experiences for high school and college students through practical exposure to science based companies and university programs, expand Project Lead The Way and STEM focused education within the Region, and create and evaluate curricular models to enhance STEM teaching and learning. Elementary aged learners will participate in STEM focused interactive summer camp experiences. Middle school students will frequent the center for STEM career events, competitions and industry speaker events. Throughout the planning we have also engaged industry partners. In addition to the dual credit, college credit STEM instruction and promotion, our STEM industry partners will utilize the facility for continuing education and employee professional development.

Subject Matter Expertise:

- International expertise in educational testing research and development at the College of Education
- Nationally recognized science and math acceleration initiatives at the Belin Blank Center
- Summer teaching workshops for math/science teachers and perhaps the teaching of environmental science through immersion experiences at the Lakeside lab

- Long track record of success in developing competitive federally sponsored and state sponsored grant applications in STEM to leverage State and Local funding
- Adequate supply of current STEM and STEM education researchers, STEM student teachers and future STEM professors of education to help promote new models of teaching and learning, including innovative methods employing digital technology
- Sophisticated Distance Learning technology and experience through our Division of Continuing Education with articulation agreements across the entire community college network.
- Longstanding faculty involvement and leadership in Project Lead The Way and other STEM outreach programs in the Iowa City Schools and other schools across the region
- Exceptional instruction and state-of-the-art facilities in technical career academies at Kirkwood Community College
- Nationally recognized intermediary network resources of Kirkwood's Workplace Learning Connection that connects K12 students with over 1,000 businesses for job shadows, industry tours, speaker and credit bearing internship opportunities.
- Track record of collaboration between the University of Iowa and Kirkwood Community College
- Institutional commitment at the highest level to advancing STEM in Iowa
- Exceptional partnership in STEM education between the state's only academic medical center and schools and community organizations statewide to foster STEM literacy in school aged children and their parents
- Diversity initiatives in STEM (e.g., women, racial/ethnic minorities, low income) in the proposed activities of the Hub. The University of Iowa has an excellent track record on these matters, an office committed to diversity, and a solid institutional commitment to trying to increase representation from these groups in STEM fields.
- Clear track record of increasing the number of STEM majors annually.

Additional Considerations:

The combination of the University/Community College partnership and existing relationships with public schools, community colleges, businesses and outreach activities will put the UI/KCC collaboration in a unique position to lead a regional STEM initiative and identify best practices that may be used throughout the State.